

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claims 1-16 (canceled)

Claim 17 (previously presented): The implant material of claim 28, wherein the matrix material is composed of a tricalcium phosphate ceramic comprising crystallographically phase-pure  $\alpha$  or  $\beta$ -tricalcium phosphate ceramic with an interconnecting microporosity of 20-60% of its volume.

Claim 18 (previously presented): The implant material of claim 17, wherein the  $\alpha$ - or  $\beta$ -tricalcium phosphate ceramic has a primary particle size of 10-40  $\mu\text{m}$  and causes no giant cell or connective tissue infiltration into the implant material.

Claim 19 (previously presented): The implant material of claim 17, wherein it is present in the form of an injectable suspension.

Claim 20 (previously presented): The implant material of claim 17, wherein the calcium phosphate matrix degrades over time to release the MP52 protein in a controlled retarded manner.

Claim 21 (previously presented): A process for the production of an implant material according to claim 28, the process comprising applying the MP52 protein in and/or on the calcium phosphate matrix as a solution in a solvent such

that a homogeneous distribution of the MP52 protein in and/or on the calcium phosphate matrix is achieved.

Claim 22 (previously presented): The process of claim 21, wherein the solvent is removed by sublimation.

Claim 23 (previously presented): The process of claim 21, wherein the MP52 protein or DNA encoding such MP52 protein is concentrated by *in situ* precipitation from the solvent in the calcium phosphate matrix by admixing a precipitating solvent.

Claim 24 (previously presented): A pharmaceutical composition comprising an implant material according to claim 14 and a pharmaceutically and physiologically acceptable material.

Claim 25 (previously presented): A method of treating a disease which affects cartilage, bone, or cartilage and bone and/or damage to cartilage, bone, or cartilage and bone in a patient in need thereof, the method comprising implanting an implant material according to claim 28, into the patient.

Claims 26-27 (Canceled)

Claim 28 (currently amended): An implant material suitable for cartilage, bone, or cartilage and bone growth comprising a matrix material which is composed of a crystallographically phase-pure calcium phosphate and applied in and/or on said matrix a cartilage inducing, bone inducing, or cartilage and bone inducing MP52 protein, wherein the MP52 protein is selected from the group consisting of

(a) a protein comprising amino acid 1 to 501, 28 to 501, 361-400 to 501, 381 to 501, 382 to 501, or 400 to 500 of SEQ ID NO. 1,

(b) a protein according to (a) which is a homodimer, and

(c) a protein according to (b) in combination with a dimer of another protein of the TGF- $\beta$  superfamily which shows cartilage or bone-inducing potential.

Claim 29 (Canceled)

Claim 30 (previously presented): A method of inducing at least one of bone or cartilage growth in a patient in need thereof, the method comprising implanting an implant material according to claim 28 into the patient.

Claim 31 (Canceled)

Claim 32 (previously presented): A method for the treatment of a bone defect or bone fracture, for application in the jaw region or dental region or for immobilizing


movable bone parts in a patient, comprising implanting an implant material according to claim 28 into the patient.

Claim 33 (previously presented): The method according to claim 32, for the treatment of periodontosis.

In the event this paper is not considered to be timely filed, the Applicant respectfully petitions for an appropriate extension of time. Any fee for such an extension together with any additional fees that may be due with respect to this paper may be charged to Counsel's Deposit Account No. 02-2135.

Respectfully submitted,

By



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